



Photos Courtesy: University of Wisconsin-Madison

Charles R. Stearns, inset, spent nearly 30 years as the principal investigator on a project that created a network of automatic weather stations across Antarctica. The pioneering meteorologist died on June 22, 2010. He was 85.

R.I.P.: Stearns, Charles R

UW-Madison Professor Was Polar Pioneer In Meteorology

[Charles R. Stearns](#), the father of the [U.S. Antarctic Program](#)'s Automatic Weather Station system and a pioneer in polar meteorology, died on Tuesday, June 22, 2010. He was 85.

Stearns was a professor in the [Department of Atmospheric and Oceanic Science](#) and senior scientist at the [Space Science and Engineering Center](#), both at the [University of Wisconsin-Madison](#).

His association with the University of Wisconsin spanned 64 years, beginning as an undergraduate in 1946, after his service as a U.S. Army infantryman in World War II (1943-1946), during which he participated in the invasions of Leyte and Okinawa.

He earned all three of his degrees from the university — a Bachelor of Science degree (1950), a Masters of Science degree in meteorology (1952) and Doctorate of Philosophy in meteorology (1967). He served as a member of the faculty since 1965.

Stearns was the principal investigator on the [Antarctic Automatic Weather Station \(AWS\) program](#) for 28 years. He began the program at the University of Wisconsin in 1980 by acquiring the first AWS designed at Stanford University. These stations were then modified for deployment to Antarctica. The AWS project represented the first large-scale meteorological instrumentation of Antarctica. Today, the program includes more 60 stations across the continent, accounting for about half of all AWS units operating in Antarctica. The data from the AWS systems are transferred back to the University of Wisconsin for processing and distribution to the public free of charge.

In 1992, Stearns envisioned another method of transforming the meteorological studies of the Antarctic — the generation and collection of satellite images — and created the [Antarctic Meteorological Research Center](#). In the beginning, Stearns envisioned using the Man computer Interactive Data Access System (McIDAS) to combine various polar-orbiter and geostationary images into one image. The AMRC continues to generate these composites today, and they remain the hallmark of the project.

Stearns taught more than 11 classes during his career and was involved in more than nine field projects. He deployed to Antarctica 17 times. He was advisor to 30 students over his career, and provided significant assistance to a half-dozen other students in the United States and abroad with their research.

Professor Stearns was a deeply respected colleague and a generous spirit who spent a significant amount of his career exploring Antarctica's weather and climate and its impacts on the rest of the world. He will be sorely missed. Obituary and memorial information will be updated on the [AWS-AMRC homepage](#) when available.